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EAP lower layer attributes for AAA protocols
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Abstract

This document defines a new AVP to be transported in RADIUS or Diameter when EAP is carried over these protocols. The purpose of this AVP is to determine which layer 2 protocol was used to encapsulate the EAP messages at the point they were initiated.

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1. Introduction

This document defines a new AVP to be transported in RADIUS or Diameter when EAP [[EAP](#)] is carried over these protocols. This information will be useful for the EAP server to determine which service initiated the EAP procedure. This situation will be common when EAP is used over a layer 2 protocol for which the EAP server is not one of the termination points. The access node where EAP is decapsulated from such layer 2 protocol will package the EAP messages over RADIUS [[RFC3579](#)] or Diameter [[DEAPapp](#)] and send them to the EAP server, which in some situations will need to have some information about the origin of the EAP messages. For example, the EAP server may wish to allow/deny access from a given lower layer for every subscriber. The AVP defined in this document will provide this information to the EAP server. The EAP server MAY use this AVP at the moment of the authorization decision, and once this decision is taken, the rest of the exchange SHOULD NOT be affected.

1.1 Abbreviations

EAP Extensible Authentication Protocol

2. Conventions

The keywords MUST, MUST NOT, REQUIRED, SHALL, SHALL NOT, SHOULD, SHOULD NOT, RECOMMENDED, NOT RECOMMENDED, MAY, and OPTIONAL, when they appear in this document, are to be interpreted as described in [[RFC2119](#)].

3. Attributes

3.1 EAP-Lower-Layer AVP

The EAP-Lower-Layer AVP indicates the layer 2 protocol which has been used to carry EAP messages. This attribute MAY be used by access devices acting as EAP pass-through authenticators, such as network access servers passing EAP from a PPP interface to a RADIUS or DIAMETER interface.

This AVP MAY be included in the Diameter-EAP-Request (DER) Command.
It MUST NOT be present in the Diameter-EAP-Answer (DEA) Command.
In case of RADIUS, the EAP-Lower-Layer AVP MAY be included in the
Access-Request message, and MUST NOT be included in any other RADIUS
message.

The format of the EAP-Lower-Layer AVP is shown below.

0 1 2 3

```

 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|EAP-Lower-Layer| Length = 1   |   Underlying Protocol   |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+

```

The values for this attribute are:

Protocol	Value
PPP	1
802.1X	2
IKEV2	3
PANA	4

4. IANA considerations

New values for the EAP-Lower-Layer AVP are to be allocated by First Come First Served [[RFC 2434](#)], in accordance with RADIUS and Diameter IANA guidelines [[RFC 3575](#)] [[RFC 3588](#)].

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6. Normative References

- [EAP] Blunk, L., Vollbrecht, J., Aboba, B., Carlson, J. and H. Levkowitz, "Extensible Authentication Protocol (EAP)", [draft-ietf-eap-rfc2284bis-09](#) (work in progress), February 2004.
- [DEAPapp] P. Eronen, T. Hiller, G. Zorn, "Diameter Extensible Authentication Protocol (EAP) Application", [draft-ietf-aaa-eap-07.txt](#) (work in progress), June 2004.
- [RFC3575] B. Aboba, "IANA considerations for RADIUS", [RFC 3575](#), July 2003.
- [RFC3588] P. Calhoun, J. Loughney, E. Guttman, G. Zorn, J. Arkko, "Diameter Base Protocol", [RFC 3588](#), September 2003

7. Informative References

[RFC2434] Narten, T. and H. Alvestrand, "Guidelines for Writing an IANA Considerations Section in RFCs", [BCP 26](#), [RFC 2434](#), October 1998.

[RFC3579] B. Aboba, P. Calhoun, "RADIUS (Remote Authentication Dial In User Service) Support For Extensible Authentication Protocol (EAP)", [RFC 3579](#), September 2003.

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.

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